

ABSTRACT

5 The present application relates to the use of the vertical blanking interval ("VBI") to broadband communications including digital data transmission on the VBI or for a dual VBI/PCS System Capable of enhancing rapid deployment of wireless VBI communications or PCS services to a remote transceiver where no or marginally profitable infrastructure exists. Specifically, the present invention provides a wireless digital communication system having a broadcast interface for encoding message information on the vertical blanking interval (VBI) of a video signal, the message information is encoded to a VBI format so as to form a pre-formatted signal. A broadcast device for transmitting an out-going signal having the pre-formatted signal modulated or otherwise embedded in the VBI of the video signal. The pre-formatted signal is received from the broadcast interface and is transmitted on a carrier of the out-going signal. At least one transceiver exists for receiving the out-going signal and for transmitting a return signal on the carrier of the out-going signal, the transceiver detects clock information relating to the synchronization bits of the broadcast and further includes a decoder for identifying the pre-formatted signal from the out-going signal so as to allow for the decoding of the message information and for displaying such message information to a user of the transceiver; an input device for inputting return message information; an encoding device for encoding the return message information; and a VBI modulating device for modulation or otherwise inserting the return signal on the out-going signal of the broadcast. The present invention further includes an antenna means for detecting the return signal that is supplied to a return signal processor (RSP). The RSP detects the return signal from the carrier of the out-going signal of the broadcast and a message

processor (MESP) decodes the message information from the return signal. The MESP is adapted to transmit the message information to public or private communications networks or public switches.

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